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AMERICAN

Copper-Mines.

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To the Chairman of the Committee of Commerce and Manufactures, to whom has been referred the petition of N. I. Roosevelt and his associates, praying for an act of incorporation of a Mine and Metal Company.

S I R,

BEING appointed by the petitioners for an act of incorporation of a Mine and Metal Company, their agent in Philadelphia, and having been permitted to give to your committee, by oral evidence, all the information upon the Schuyler's copper mine which I possess, I take the liberty to submit the same to you again in the present sheet, in order that the great variety of facts, relating to the subject, may be before you in a more concise and intelligible form, than it could be put into, when I had the honor of attending the committee.

I have anxiously avoided to put down any thing respecting the history of the mine, for which satisfactory evidence from the books of the proprietors was not produced to me on the spot. The state of the works, and of the mine I have myself carefully inspected, and have often enquired, and conversed with the workmen on the quality and quantity of the ore likely to be expected in future, from their experience of what they have formerly procured.

When I made the enquiries upon which my evidence is founded, it was neither with a view, nor with the most distant expectation of being called upon for the purpose of giving information on the subject to so honorable a body: otherwise I should have gone more fully into the detail of examination. My object, as engineer to the city of Philadelphia, was to obtain an accurate knowledge of the value of the works which were offered as a security to the Cor-

poration, for the performance of a contract by N. I. Roosevelt to construct two steam engines for the supply of the city with water, on account of which a very large advance was to be made. I had therefore every reason to be particular in my enquiries, as far as they necessarily went; and I carried them, from an habitual love of natural history, further than was necessary, so as to enable myself to be positive on all I have asserted on the subject: and I should feel myself very ill deserving of your confidence, and forfeit my own respect, were I to suffer the zeal of an agent, to carry me, either in respect of facts or their coloring, beyond what I believe to be true.

I am, with true respect,

Your faithful, &c.

B. HENRY LATROBE.

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**T**H E Schuyler Copper-Mine, situated between the rivers Passaic and Hackensack, near their confluence, in the state of New-Jersey, was discovered about the year 1719 by Arant Schuyler, grandfather to the gentleman of that name now living. The ore was found where it appeared on the side of the hill, was easily raised, and as the policy of England—at that time,—prohibited the establishment of smelting works or manufactories in her colonies, it was packed in casks each containing about four *Cwt.* and exported, in its state of ore, to England. It appears by his books, that before the year 1731, Arant Schuyler had shipped 6,933 casks, making about 1,386 ton of raw ore, to the Bristol copper and brass company. His son, Colonel John Schuyler, prosecuted the work with more numerous and skilful hands. The quantity of ore raised by him, is not known, as his books were lost during the war. In 1761, the mine was leased to a company who procured the assistance of Mr. Hornblower, the uncle of the present eminent steam engineer, from England. They erected a steam-engine, of the imperfect construction then in use. The engine-house, composed of combustible materials, was soon afterwards burned down. It was however rebuilt, and the mine was worked for four years with great

advantage and profit. In 1765, a workman, who had been dismissed, set fire to the engine-house,—it was again destroyed, and the works were discontinued by the company. Several gentlemen in England however, whose connection with the company had taught them the superior quality of the ore of Schuyler's mine, applied successfully to the crown for permission to establish works in America for smelting and refining copper; and an offer was made to Mr. Schuyler to purchase the whole estate containing the mine, for the sum of one hundred thousand pounds sterling. This offer he refused, but agreed to join them in rebuilding the engine and working the mine. The disputes, which about that time arose between England and America, and the consequent revolutionary war, put an end to the projected works, and the deranged state of the country, previous to the adoption of the Federal constitution in 1788, and other subsequent circumstances, occasioned the total neglect of this in every respect important mine, till the year 1793, when a company was formed who undertook the work with new vigor. They collected, at a very considerable expence, miners and smelters from England and Germany, purchased a freehold estate convenient for the erection of furnaces and manufactories, with an excellent stream of water, re-erected the engine, and they began and partly compleated the works enumerated hereafter. At the instance of an active member of this company,\*—who to great metallurgic knowledge and experience, and to much personal address, joined a spirit perhaps much too unbounded in its projects, and far outstripping the means and wants of our present population,—an application was made to Congress in 1796 for an exclusive right to search for, and work all mines within the North-west and South-west territories belonging to the United States, for thirty years. This monopoly was to descend from mines of gold and diamonds, down to clay-pits and slate-quarries. The application was not, and perhaps ought not to have been successful.—Soon afterwards, one of the proprietors of the mine who was a principal shareholder in the company died, and the whole interest of the Company has since been purchased by N. I. Roosevelt.—This is the concise history of this mine to the present time. No other has as yet been wrought to effect in North America.

\* Mr. Langworthy.

Of the prospect of success and profit in the prosecution of this mine, little ought to be said *on speculation*. Facts only, which may easily be examined and verified, should be brought forward. It may perhaps be proper to state a few of these.

I. The ore of the Schuyler's mine yields, in each hundred pound of copper, from four to seven ounces of silver, and like most copper ores, a small portion of gold. At the time when pure copper was sold in England at seventy-five pounds sterling per ton, the ore of Schuyler's mine was shipped for England at New York at seventy pound sterling per ton. This proves the uncommon richness of the ore, and the small expence of converting it into metal. An offer has lately been made by Messrs. Bolton and Watt to purchase all the ore which can be raised, and to enter into contract for that purpose.

II. The company established in 1793 have raised no ore from new ground. Their works have only been preparatory. They cleared old levels, sunk new shafts, and provided for the complete drainage of the mine for twenty years to come, should more than one hundred hands be employed in it during that term. In removing the deads, or rubbish, which choked the drifts and levels, they have however selected, without scrupulous examination, a quantity of inferior ore; which yields an average of fifteen pound of copper at least, in one hundred pound of ore. This ore, part of the stock on hand, at so low a calculation, will yield fifty tons of copper, worth now when manufactured 1,000 dollars per ton, at least, or 50,000. It is asserted, from good authority, that all the deads will yield more copper per cent, than many mines now profitably wrought in Germany.

III. The Engine, before the very important improvements which it has lately received in its construction, and consequently in its powers, drained dry when set to work in 1793, in four days, *all the works*, from the water which had accumulated since the last working, many years before. This proves the sufficiency of the Engine, and that the objection that the mine cannot easily be drained is quite unfounded. As to the expence of keeping the engine, it will be not more than 4,500 dollars per annum.

IV. It has been said often, and confidently, that the first adventurers in Schuyler's mine made their fortunes, because the ore was then *richer* and more easily procured than at present. The fact is however otherwise. The ore never was more rich than lately, yielding at an average 75 per cent, and it will be more easily and cheaply procured in future,—in consequence of the preparatory works hereafter to be enumerated and the better method of working to be adopted,—than ever since the year 1750, when the ore retired to considerable depth and distance from the side of the hill: And yet since that time 444,000 dollars (100,000 pounds sterling) have been offered for the mine by intelligent Englishmen, when it was in its worst state of working,—without an engine, and without a draining shaft lower than the levels.

It is true that the last company, far from deriving benefit, have expended large fortunes in their works at the mine. But they expected no profit from what they have hitherto done, they have not even smelted any considerable quantity of the ~~ore~~ selected from the deads.—The death of one of this small company, the return of the most busy to England, and principally the very low price of copper in the European and consequently in the American market, deranged and delayed their operations.—At that time, the Anglesea mine depreciated, by its most extraordinary fertility, every other European mine; its proprietors were emboldened to attempt the annihilation of rivalship, by under selling every competitor; to purchase the forsaken works; and thus to monopolize the copper trade of the civilized world. But the treasure disappeared almost as suddenly as it had been discovered, and the government of Great Britain has not only been driven to prohibit the exportation of copper, but application has been made to contract for all the ore which the Schuyler's mine can produce. The reward of the labors and sacrifices of the present proprietors, is therefore still to come, and, should an act of incorporation be obtained, will be divided, in proportion to their assistance, among those who shall constitute the company.

Nicholas I. Roosevelt is the present proprietor of the lease of Schuyler's Copper mine, for 38 years to come,

and of all the works, shafts, engines, buildings and utensils belonging to it,—and also of the fee simple of a certain tract of land, with the furnaces, smelting, stamping, and boring works, coal houses, and hummers, erected by the late company or by himself for the purpose of preparing, refining and manufacturing the copper. This tract is called Soho, and is situate on second river, near Newark in the state of New-Jersey, at a convenient distance from the copper mine. He, and the late company have expended very large sums of money in sinking a shaft calculated to drain all the present shafts and levels, and such as may in future be sunk upon the tract containing the mine, and to win all the ore which may be found below the utmost depth of the present shafts and levels, to a depth of 40 feet lower. A level is also driven 100 feet below the surface at the engine house, which will drain the works into Hackinsack-marsh and render the lift of the engine 100 feet less, thereby increasing its power in proportion.—He has also repaired and improved the steam engine erected at the shaft, so as to render it fully adequate to the draining of the mine, and the raising of all the ore.—He has put the works at Soho into a state of perfection, unrivalled in the United States, and capable of smelting and refining the ore to the greatest possible advantage and profit.—It is evident from inspection of the shafts, works, and levels, which from the earliest times have been worked at the mine—that in no instance there is reason to believe that the viens which have hitherto proved so rich and fertile are likely to fail either in the quality or quantity of their ore, and that but a very small part in proportion of the mine has been explored, as chance, and the imperfect method of working the same hitherto, have directed.—The expence laid out by the late company and the present proprietor in the said shafts, level and works has not been calculated or intended for the raising of ore in the first instance,—but only to render the mine capable of yielding, whenever the vien shall again be put into work, without the necessity of any collateral expence for drainage, the greatest possible quantity of ore; so that the mine is at present in the most advantageous state in which the working can possibly be recommenced.

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B. H. LATROBE.

